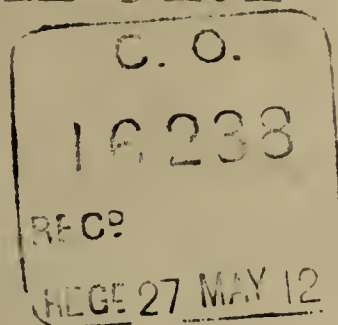


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# ANNUAL REPORT



ON THE



# MEDICAL RESEARCH INSTITUTE

FOR THE YEAR

1911.

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## Medical Research Institute Yaba Report 1911.

The Colonial Secretary in his letter No. <sup>B. 4244/1911</sup><sub>75 of the 5th January, 1912.</sub> has called for a Report upon this Institute for the year 1911.

In attempting to comply with this order I find myself in a difficulty.

I left the Colony on leave on the 23rd March, 1911, and during my leave at home wrote my Report upon the working of the Institute bringing the information up to April, 1911. This Report was submitted on my return to the Colony at the end of the year.

To enable me to go on leave Dr. A. E. Neale, a junior Medical Officer of the West African Medical Staff was seconded to the Institute to carry on the work during my absence. He also submitted a Report annexed upon the work done by him during his term of residence. His Report has not been submitted to me but there is the evidence of the Medical Research Institute letter book that it was presented before Dr. Neale went on leave.

I am now asked to produce another further Report on 1911 without additional material.

In the absence of this fresh material and in almost complete ignorance of the work done here during my six months absence on leave I can add very little of interest to the two Reports already submitted in 1911.

*New Buildings.*—The new buildings have been in course of erection during the year 1911. They were begun in October, 1910, and were practically complete at the end of 1911. They provide a bacteriological laboratory, a sterilizing room and an incubation room under one roof; an operating theatre connected to the laboratory by a covered way; a reaction stall, and a stall for large animals. At my suggestion an alteration in the Eaves was made to improve the lighting of the laboratory and the gas-fittings were at the same time put in. The design of these buildings has been adopted from that of the Madras Institute and will provide comfortably cool rooms suitable for bacteriological work in a tropical climate. A small incinerator which I hope to see built next year will complete the plan and render it suitable for all present requirements.

*Grounds:*—The new buildings have rendered necessary some re-arrangement of the grounds and the laying out of new paths and lawns. This work is at present in progress and will, I hope, be completed before the rains set in.

*Fencing:*—A handsome iron fence on a concrete base has been erected along the whole of the front boundary. It adds very greatly to the beauty of the grounds. The three other sides of the property are effectively enclosed with a strong fence made of galvanized iron sheet mounted on wooden posts.

The fencing has already, as I expected, caused an almost complete disappearance of the plague of ticks which formerly made it impossible to walk a hundred yards in the grounds without subsequently finding a number of ticks upon the person.

*The European Staff:*—During most of the year the staff has been limited. For the first 3 months, the Director was in charge single-handed. Dr. A. E. Neale, Medical Officer, West African Medical Staff, was seconded to relieve him. Dr. Neale arrived here on the 28th February to enable the Director to teach him the work of the Institute. The Director went on leave on the 23rd of March and during his absence the work of the Institute was carried on by Dr. Neale. The Director returned from leave and resumed duty at the Medical Research Institute on 29th September.



In September, Dr. H. S. Coghill, West African Medical Staff, who has been a Demonstrator at the London School of Tropical Medicine was appointed Assistant to the Director and he arrived in Lagos and assumed duty on the 6th October.

*The Native Staff.*—The native staff consists of 2 Laboratory Assistants as formerly. Both of the present holders were appointed during my absence on leave.

*Museum.*—The whole of the collection of ticks, fleas, bugs and intestinal worms as well as the mosquito and other dipterous larvæ has been gone over and arranged under printed labels in suitable museum jars recently obtained from England.

No specimens were added to the collection during my absence.

*Library.*—The number and completeness of the reference books increases yearly and many of the best scientific journals in English, German and French are provided. Until the present, the library has only been used by the staff of the Medical Research Institute though it is of course open to any member of the West African Medical Staff.

Both Museum and Library are still housed in the rooms enclosed beneath the Director's bungalow.

*Research.*—The work done during the first 3 months of the year has been described already in my earlier report. With the object of studying the very important and little known subject of the pathological conditions obtaining in the organs especially of native cases, I asked to be supplied with small specimens of the internal organs from every case in which a Post-mortem Examination was made. I had also asked to be supplied with blood smears and urine from all Blackwater Fever cases. To both requests the general response was meagre though some few Medical Officers sent in interesting pathological material for examination.

A number of new investigations have been begun and are still in progress.

1. A pathological and statistical investigation of Blackwater Fever in this Colony.
2. An examination of the gut and salivary glands of a certain diptera.
3. An enquiry into the factors inducing ovipositing by mosquitoes in special fluids.
4. An examination of the water of Lagos public wells regarding their living contents, especially with regard to the distribution of cyclops.

All these investigations are still in progress and incomplete.

*Routine Clinical Work, etc.*—On my return I found a large amount of pathological material and a number of insects and larvae awaiting examination. All this material was worked through and identifications, etc., communicated to the senders.

All pathological material sent for diagnosis and all insects sent for identification have been dealt with daily.

A few analyses of water have been made as well as urgent analyses required by the Comptroller of Customs, in the absence of the Government Chemist.

(Signed) W. M. GRAHAM, M.B., ETC.,  
Director Medical Research Institute.

Yaba,

12th March, 1912.

## Medical Research Institute, Yaba.

I have the honour to submit my report for the period during which I have been Acting Director of the Medical Research Institute.

2. I came into residence at the Medical Research Institute on February 28th, 1911, and commenced duties on March 1st, becoming Acting Director on the departure of Dr. Graham on March 23rd.

3. During my seven months' residence, my time has been most fully occupied with what I might term routine work—*i.e.* straightforward work which did not, for the *most part*, require any original research—in fact there was so much of this work that there was scarcely any time for any protracted investigations in original research.

4. I have examined and reported on the water contents of 663 Native pots, barrels, tins, etc. from Lagos, Calabar, Bonny, Bende, etc.

Mosquitoes—some hundreds  
 Tabanidæ—117 specimens  
 Glossina—37                    ,,  
 Sandflies—24                 ,,  
 Ticks—258                    ,,  
 Worms—22                    ,,  
 Blood Slides—Numerous  
 Other slides—gland juice, etc.—7  
 Urines from Blackwater Fever cases—15  
 Insects of various kinds—large numbers of—including  
     fleas, chiggers, bugs, etc.  
 Pathological specimens received—14  
 Rats, for examination of—24.

5. Specimens and material have been received from the following:—

Dr. W. H. G. Best, Provincial Medical Officer, Eastern Province,	
,, St. Geo. Gray, Senior Medical Officer, Opobo,	
,, J. C. M. Bailey,	,, Forcados,
,, P. H. Macdonald,	,, Bende,
,, G. H. Gallagher,	,, Abakaliki,
,, Geo. Wilson,	,, Okwoga,
,, M. E. Odea,	,, Degema,
,, T. L. Craig, Resident	,, Lagos,
,, L. H. Booth,	,, Ebute Metta,
,, J. B. Bate,	,, Bonny,
,, G. Hungerford	,, Ibadan,
,, E. J. Tynan, Medical Officer of Health,	Lagos,
,, E. L. Sieger, Medical Officer	Bonny,
,, F. Ross,	,, Wuterri, N.N.
,, E. Adams,	,, Ilorin,
,, ———	,, Ikorodu Shagani,
Mr. W. H. P. Beals, Veterinary Officer,	Kumasi, G.C.
,, E. P. Birch, Acting District Commissioner,	Oyo,
Dr. Snell, Medical Officer,	Jebba, N.N.
,, Jackson Moore,	,, Agbor,
,, F. B. Thompson,	,, Bonny,
,, T. H. Suffern,	,, Okigwi,
,, Lynch Burgess,	,,
,, Macpherson,	,,



6. *Blackwater Fever*.—My investigations in this have shewn more clearly than ever, how absolutely necessary it is for any one working on this disease, to be “on the spot,” as it were.

Urine samples are contaminated before they reach the Medical Research Institute, and the presence of profuse bacillary infection interferes with, and obscures the investigations being carried out.

It was the presence of this large degree of contamination, which led me to suggest in my letter to the Honourable Colonial Secretary, No. 193 of 10th June, that an officer from the Medical Research Institute should be in attendance at Hospital where possible, in order to obtain specimens of blood, urine, etc., under sterile conditions, so that subsequent examination would be conducted under the best possible conditions.

This contamination has not been caused by any carelessness on the part of the Hospital Staff, all of whom have their hands more than full when serious cases are in Hospital. But the collection of urine in these cases must be carried out under special conditions—quite impossible for the Research Medical Officer to do, with his onerous duties. This is where much good work might be done by an officer of the Medical Research Institute being present to attend to this, with the co-operation of the Resident Medical Officer, Hospital. Special sterile vessels should be provided for the collection and transmission of urine samples. Urine, more so than milk, is especially liable to aerobic contamination, and chemical change, hence the great precautions necessary in its collection.

I have received and examined urine from six cases of Blackwater, and blood in four cases. All reports and notes on Blackwater Fever Cases have been forwarded to Dr. Graham in England, for use in the preparation of his Blackwater Fever Report.

7. *Mosquito larvæ and water borne parasites*.—Examining water samples for the above has occupied a great deal of time. I have furnished the Medical Officer of Health, Lagos, with monthly results, so far as my investigations affected Lagos and Ebute Metta.

8. *Insects*.—The Examination and identification of these has also taken up much time, the more so as I have not, naturally, much of this subject at my finger’s end, as it were.

My wife has, however, helped me considerably in this line by mounting the specimens ready for examination, etc.

9. *Pathological Work*.—Much of this has had to stand over for want of time. Specimens have been received and bottled ready for examination when the staff of the Institute is increased.

10. *Rat Examination*.—I received from the M. O. Ilorin, at the request of the P. M.O., Northern Nigeria, a number of rats, some alive, others in formalin.

These were from a village where a very fatal outbreak had occurred amongst the villagers.

It was noticed that rats had invaded the village in large numbers, and bitten many natives who died. They attributed, therefore, the outbreak to rats.

I have, however, carefully examined the rats received and can find nothing in them to cause disease. In fact they were particularly healthy, and freer from parasites than any I have hitherto examined.

Samples of mosquito larvæ and water, were received at the same time, for investigation. The latter I forwarded to the Government Chemist for analysis.

11. *Clerical Assistance*.—I have, in response to advertisements in the Southern Nigeria Gazette, appointed two clerks or laboratory assistants. These are shaping well, and have latterly relieved one of much office work. They are picking up their new duties very well.

12. *Registration of Species*.—I ordered and have obtained from the Government Printer a specially made and indexed book for the registration of all species received at the Institute, together with donors' names, place of capture, and other particulars. This I have now got well in hand, and it will be invaluable for reference. Other books for the more efficient working of the Institute have also been started.

13. *Maps for locating habitat of Biting Flies*.—Two maps have been obtained for this purpose from the Intelligence Office, and I have asked for maps also of other West African Colonies in order to depict their fly areas.

I have not started to fill in either of these maps yet, as I wish the Register completed first, after which the maps can be filled in with great ease from it.

14. *Building* has been going on during the whole of my residence here.

- (a) The new Laboratories are completed with the exception of a few small matters. They should be ready for occupation early in October.
- (b) Bungalow building for the Assistant Bacteriologist is now going ahead. Work on this was entirely closed down for some time owing to the heavy and prolonged rainy season.
- (c) Extension of roof and verandah for the old Laboratory is nearly completed, and will be a great improvement.
- (d) A well is being sunk for the use of the new bungalows and the Government Chemist's laboratory.
- (e) The Government Chemist's Laboratory is in course of construction.
- (f) It has been somewhat difficult to keep the grounds just as I would have liked, owing to the large number of workmen constantly employed—four distinct gangs.
- (g) The new permanent concrete and iron fence is in course of erection and will add greatly to the comfort and appearance of the place.

15. I feel convinced that a very great deal of useful work will be done here with an efficient staff, work which will benefit the whole of West Africa. And to this end I hope that my suggestions as to increase of staff, as contained in my letter to the Hon. Colonial Secretary on the subject will receive careful consideration.

A. E. NEALE,  
*Acting Director Medical Research Institute.*

28th September, 1911.









